

CLIMATOLOGICAL DATA FOR JANUARY, 1913.

DISTRICT NO. 11, CALIFORNIA.

Prof. ALEXANDER G. MCADIE, District Editor.

GENERAL SUMMARY.

January, 1913, was the coldest January since 1898. In some localities lower temperatures were recorded than at any time since records have been kept. During a period of cold weather covering the last week in December, 1912, and the first week in January, 1913, temperature records were broken at a number of places in the State. Perhaps the most noticeable of these was at San Diego, where a minimum of 28.4° occurred at 4.15 a. m., Monday, January 6, breaking all minimum records at this station for a period of 64 years. On the next morning a minimum of 24.9° was recorded at 6.15 a. m., or 3.5° lower than the minimum of the preceding day. The lowest minimum at Los Angeles was 28° , or as low as any previously recorded. At Fresno a minimum temperature of 17° was recorded, or 3° lower than had previously occurred. At San Luis Obispo a minimum temperature of 20° was recorded, which was the lowest for 18 years. In the northern portion of the State the temperatures did not fall as low as in the southern portion. Thus, at San Francisco, while the minimum temperature on the morning of the 6th was the lowest for many years, it was 4° higher than the low temperature recorded on January 15, 1888. At Southeast Farallon a minimum temperature of 39° occurred on the 6th and 9th, and only once in the past 10 years has a lower temperature been recorded. At Mount Tamalpais the temperature fell to 22° , which was the absolute minimum for a period of 15 years. Likewise at Point Reyes Light a minimum of 33° was recorded, which is the lowest in 22 years. At Sacramento a minimum of 26° occurred, but this did not break the record, which for a period of 36 years is 19° . At Red Bluff the minimum temperature was 28° , or 10° above the lowest of record. At Eureka a minimum of 28° occurred, which was 8° above the record. Elsewhere will be found a discussion of the frosts and minimum temperatures in the citrus fruit belts of California. In a general way it may be stated that not since January, 1888, has there been a cold period so severe throughout the State as a whole, while in the southern counties the temperature was lower than has been known for a period of 60 years.

The month was one of nearly normal precipitation, although it was not well distributed, nearly all occurring between the 8th and the 22d. There was no rain during the last week of the month.

January, 1913, was in marked contrast to January, 1912, which was a warm, dry month. The month began with a pressure distribution favorable for north winds and comparatively low temperatures. Heavy frosts occurred January 4, 5, 6, 7, and 8, for which ample warnings were given. A depression of unusual depth over the Valley of the Colorado on Saturday, January 4, and Sunday, the 5th, caused high north-northwest winds, and typical frost conditions occurred on the 6th, 7th, and 8th. The most severe weather known for many years was reported during this period and great injury was done to oranges, lemons,

nursery stock, and ornamental trees. The damage can not safely be estimated, as it was far-reaching. In connection with the citrus industry a conservative estimate of the loss is \$15,000,000. Fortunately the killing frosts were followed by cloudy, rainy weather with no high temperatures, and the weather continued unsettled for about a fortnight. Thunderstorms occurred in the San Francisco Bay section on the 14th and 15th and in the Sacramento Valley on the 15th.

The snowfall was above the normal and at the close of the month the depth and extent of the snow cover was much greater than at the close of January, 1912. The run-off was light and while there was no excess of water, there have been no complaints of scarcity.

TEMPERATURE.

The mean temperature for the State was 4° below the normal, and with one exception it was the lowest since 1896. The following table gives the means and departures for each January from 1897 to 1913, inclusive:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
1897.....	° F. 45.5	° F. -0.3	1906.....	° F. 47.5	° F. +1.7
1898.....	41.0	-4.8	1907.....	43.9	-1.9
1899.....	46.4	+0.6	1908.....	46.7	+0.9
1900.....	47.9	+2.1	1909.....	47.8	+2.0
1901.....	43.9	-1.9	1910.....	41.9	-3.9
1902.....	44.5	-1.3	1911.....	45.7	-0.1
1903.....	46.6	+0.8	1912.....	47.7	+1.9
1904.....	45.8	0.0	1913.....	41.6	-4.2
1905.....	48.3	-2.5			

The highest temperature recorded at any station was 88° at Azusa, and also at San Jacinto, on the 3d. This was not as high by 2° as the highest recorded during January, 1912. The lowest temperature was -21° at Alturas on the 23d. This was 5° higher than the lowest temperature recorded during January, 1912. The highest monthly mean was 52.6° at Avalon. The lowest monthly mean was 18.5° at Macdoel.

PRECIPITATION.

The precipitation was nearly normal. The following table gives the average precipitation and departure from the normal for each January from 1897 to 1913, inclusive:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	Inches.	Inches.		Inches.	Inches.
1897.....	2.69	-2.72	1906.....	7.86	+ 2.45
1898.....	1.08	-4.33	1907.....	7.46	+ 2.05
1899.....	3.53	-1.88	1908.....	4.63	- .78
1900.....	3.30	-2.11	1909.....	16.17	+10.76
1901.....	5.21	- .20	1910.....	4.86	- .55
1902.....	1.38	-4.03	1911.....	13.20	+ 7.79
1903.....	4.56	- .95	1912.....	3.53	- 1.83
1904.....	1.38	-4.03	1913.....	5.06	- .35
1905.....	4.37	-1.04			

The greatest monthly precipitation was 20.47 inches at Branscomb. At two stations no precipitation was reported during the month. The greatest 24-hour rainfall was 5.40 inches at Mono Ranch on the 15th.

Snowfall.—There was a moderate snowfall in the mountains, and at the close of the month more snow remained on the ground than at the same date last year and about as much as in 1908. There was less snow than in 1909 and 1911. The month was so cold there was less melting and also less evaporation than usual. The run-off was light, and at nearly all points streams were lower than usual. The following table shows the depth of snow on the ground at Summit, Cal., on certain dates in January during the period 1907 to date:

	Jan. 1.	Jan. 15.	Jan. 31.
	Inches.	Inches.	Inches.
1907.....	45	142	148
1908.....	87	72	57
1909.....	28	90	172
1910.....	54	87	68
1911.....	4	136	218
1912.....	60	46	41
1913.....	17	72	88

SUNSHINE.

The following table gives the total hours of sunshine and percentages of the possible:

Stations.	Hours.	Percent- age of possible.	Stations.	Hours.	Percent- age of possible.
Eureka.....	153	45	Sacramento.....	192	63
Fresno.....	178	58	San Diego.....	230	72
Los Angeles.....	223	71	San Francisco.....	186	60
Mount Tamalpais.....	194	63	San Jose.....	194	63
Red Bluff.....	182	60	San Luis Obispo.....	193	62

CHANGES IN NAMES OF STATIONS.

The following changes have been made in the names of stations, and the new names are used, beginning with the present issue:

Bear Valley No. 1 changes to Lake Spaulding.

Prattville changes to Nevis.

NOTES ON THE RIVERS OF THE SACRAMENTO AND LOWER SAN JOAQUIN WATERSHEDS DURING JANUARY, 1913.

By N. R. TAYLOR, Local Forecaster.

Sacramento Watershed.—The rivers of this watershed averaged from 1 foot to over 5 feet above that of the preceding month. They were, however, below the stages usually maintained during the month of January.

General and heavy rains fell in the watersheds of the Upper Sacramento and Lower Pit rivers from the 12th to the 19th, inclusive, with considerable snow at low altitudes, causing a rapid rise in the Sacramento River north of the Feather. At Red Bluff the river rose 13 feet during the 24 hours ending at 7 a.m., of the 14th. This swell reached Jacinto on the 15th and Colusa on the 16th, causing rises of 7 and 11 feet, respectively, at those places. The swell flattened as the lower reaches of the river were approached and amounted to only 4 feet at Sacramento City. The highest stage reached was 21.9 feet at Colusa on the 16th.

The rainfall in the American, Feather, and Yuba watersheds was coincident with that of the Sacramento, except that there was considerably less. There was, however, a heavy snowfall above the 2,000-foot level and

especially in the higher regions, but owing to the prevailing low temperatures neither the main streams nor their feeders showed any marked increase in run-off.

On about the 20th all streams in the Sacramento Basin began falling and continued to do so until the close of the month.

At the end of January the accumulated snow in the mountains ranged from about 18 inches at the 4,000-foot level to nearly 8 feet at the summits.

The Lower San Joaquin Watershed.—Rain was general throughout the drainage basin of the Lower San Joaquin Valley from about the 14th to the 20th, inclusive. It was heavy in the upper watersheds of the Tuolumne, Stanislaus, Calaveras, Mokelumne, and Cosumnes with heavy snow at the higher levels. On the floor of the valley the rainfall was relatively light, especially north of San Joaquin Bridge. Notwithstanding the rainfall the rivers remained low during the greater part of the month and there was no rise at any time greater than 1 foot.

After the 20th all streams fell slowly and by the close of the month had practically reached the low stages that obtained prior to the rains.

NOTES ON THE STREAMS OF THE UPPER SAN JOAQUIN WATERSHED.

By W. E. BONNETT, Local Forecaster.

Rainfall during January, like that of the preceding several months, was largely deficient in the watershed of the Upper San Joaquin River, and the streams remained at low stages. The deficiency in seasonal precipitation about equals the shortage to January 31, 1912, and the mean stages at Merced Falls and Friant for January this year are the same as last year. At Firebaugh there was no fluctuation in the stream during the month and the stage was the lowest recorded in January.

Following the general rains of the 15th, 16th, and 17th the Merced rose about 1 foot and fell slowly during the remainder of the month. Precipitation was lighter in the watersheds of the Upper San Joaquin itself and in the Kings, and rises at Friant and Piedra were extremely small.

DAMAGE BY LIGHTNING NEAR SAN FRANCISCO.

By A. G. MCADIE.

On January 15, 1913, shortly before 1 a. m., lightning struck the tower of the life-saving station at Bonita Point and did considerable damage. It set fire to the captain's room, but it was quickly extinguished; the damage was estimated about \$500. A flagpole, standing on somewhat higher ground to the northward, was also struck and partly destroyed. It may be stated that occurrences of this kind while rare are not unknown. At San Francisco the first thunder was heard at 12.01 a. m., and last at 1.15 a. m. The direction of the wind before the storm was southwest and after the storm south. The temperature before the storm, 52°, and after the storm, 42°.

NOTE ON WEATHER AT FRESNO, CAL., DURING JANUARY, 1913.

By W. E. BONNETT, Local Forecaster.

January was a month of abnormal and generally unfavorable conditions. A severe dust storm occurred on the 4th, when the wind increased during the forenoon to 30 miles per hour by noon, a velocity which was then maintained for about six hours, and a new wind record

TABLE 1.—Climatological data for January, 1913. District No. 11, California.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.			Sky.	Prevailing wind direction.	Observers.					
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>Oregon.</i>																				
Klamath Agency.	Klamath.	4,160	4	17.4	-11.0	39	27	-12	23	31	3.80	+ 1.11	0.90	38.0	8	13	9	nw.	Edson C. Watson.	
Klamath Falls.	do.	4,100	23	19.0	-6.6	42	3	-6	23	27	3.57	+ - 1.54	0.83	43.0	16	14	4	s.	Augusta J. Hayden.	
Lakeview.	Lake.	4,825	29	21.6	-6.6	47	27	-8	6	36	1.04	-	0.20	12.0	7	11	6	14	C. C. Gott.	
Merrill.	Klamath.	4,070	6	18.6	-	41	27	-15	23	39	1.35	-	0.39	-	6	5	11	15	Mrs. W. L. Hensel.	
Yonna.	do.	4,146	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>California.</i>																				
Alturas.	Modoc.	4,400	9	21.6	-	51	2	-21	23	48	1.92	-	0.55	26.0	10	13	7	11	sw.	
Angiola.	Tulare.	208	13	46.4	0.0	69	27	5	6	42	0.67	-	0.83	0.65	0	3	23	8	n.	Santa Fe Co.
Antioch **.	Contra Costa.	46	34	50.0	+ 3.5	79	26	23	6	27	2.74	+ 0.25	1.03	T.	8	19	0	12	Southern Pacific Co.	
Aptos **.	Santa Cruz.	102	28	45.7	-2.8	62	2	27	7	51	5.11	-	0.41	1.40	0	9	17	0	14	Do.
Arrowhead Springs.	San Bernardino.	2,000	4	50.4	-	79	3	22	5	34	3.00	-	1.40	3.0	3	25	2	4	Dr. E. J. Erekson.	
Auburn.	Pleasant.	1,360	42	41.9	-3.7	67	28	20	6	27	4.34	-	2.17	1.00	3.0	9	20	2	9	Southern Pacific Co.
Avalon.	Los Angeles.	30	3	52.6	-	74	3	34	7	20	1.34	-	0.59	0	5	26	4	1	T. S. Manning.	
Azusa.	do.	540	11	50.2	-2.8	88	3	20	7	43	2.02	-	1.88	0.95	0	4	25	3	3	A. P. Griffith.
Bagdad.	San Bernardino.	784	10	48.7	-4.7	74	30	10	7	30	0.00	-	0.33	0.00	0	-	-	-	-	Santa Fe Co.
Bakersfield.	Kern.	404	24	44.8	-2.6	71	31	14	7	39	-	-	-	-	-	-	-	-	Do.	
Barstow.	San Bernardino.	2,105	10	45.4	-2.4	75	29	12	7	41	0.30	-	0.32	0.20	2.0	2	27	0	4	E. L. White.
Berkeley.	Alameda.	317	26	46.2	-1.3	68	31	28	6	26	3.78	-	1.60	0.82	T.	11	15	5	11	State University.
Betterville.	Santa Barbara.	-	-	46.8	-	76	3	8	5	52	2.74	-	1.32	0	6	-	-	-	-	
Biggs **.	Butte.	98	14	39.7	-7.2	68	17	17	6	67	3.08	-	1.15	0.70	3.0	9	18	3	10	Southern Pacific Co.
Bishop.	Inyo.	4,450	31	31.3	-7.4	68	2	0	6	50	1.25	-	0.22	0.80	12.5	4	27	0	4	Paul E. Lodge.
Bishop Creek.	do.	8,500	3	24.6	-	51	3	-12	6	35	4.52	-	2.10	45.2	7	-	-	-	Do.	
Blocksburg.	Humboldt.	1,700	7	39.0	-	69	31	16	6	39	15.60	-	3.25	26.0	14	8	4	19	se.	
Blue Canon.	Placer.	4,695	14	34.1	-4.2	80	4	7	5	48	12.31	-	1.32	2.40	117.0	12	19	1	11	s.
Blythe.	Riverside.	268	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Branscomb.	Mendocino.	2,000	13	41.2	-1.7	77	31	19	5	38	20.47	+ 1.31	4.70	16.5	11	17	5	9	n.	
Brawley.	Imperial.	-105	48.7	-	-	81	30	21	8	45	T.	-	0	30	0	1	-	-	M. D. Witter.	
Burney.	Shasta.	3,300	3	29.1	-	57	26	3	11	43	4.95	-	1.37	27.0	10	13	6	13	sw.	
Cahuilla.	Riverside.	3,600	2	38.0	-	75	3	0	15	49	0.62	-	0.60	6.0	2	23	7	1	Dr. W. L. Shawk.	
Calixico.	Imperial.	0	8	49.5	-	77	30	21	7	40	T.	-	0	0	29	0	2	nw.		
Caliente **.	Kern.	1,290	37.2	-6.7	62	30	19	6	-	1.30	-	0.47	0.55	T.	3	12	2	17	J. E. Peck.	
Calistoga **.	Napa.	363	41	44.8	-3.3	70	30	27	11	7	33	-	0.68	0.79	0	9	15	0	nw.	
Campbell.	Santa Clara.	217	16	44.2	-3.4	68	31	21	7	33	2.04	-	0.70	0	7	18	3	10	Do.	
Camptonville (near).	Yuba.	3,500	6	39.6	-	68	31	10	6	32	12.54	-	2.01	55.0	12	18	0	13	F. M. Righter.	
Cedarville.	Modoc.	4,675	19	22.8	-7.7	51	3	-5	6	36	1.66	-	0.35	0.37	25.8	9	7	24	sw.	
Chico.	Butte.	189	43	42.3	-4.6	69	30	13	6	37	4.53	-	0.20	0.71	6.0	10	18	0	13	T. H. Johnstone.
Chino Flat.	Humboldt.	600	4	39.8	-	59	30	18	6	27	13.46	-	2.40	9.0	11	12	6	13	G. H. Stephenson.	
Chino.	San Bernardino.	714	21	43.4	-7.7	68	27	16	7	37	1.00	-	2.96	0.80	0	2	26	0	5	O. I. Westerburg.
Cisco **.	Placer.	5,930	42	30.1	-0.6	50	2	6	5	51	11.20	+ 1.78	1.80	112.0	13	18	0	13	Southern Pacific Co.	
Claremont.	Los Angeles.	1,200	21	45.8	-2.2	84	3	19	7	41	1.96	-	0.96	0	6	20	6	5	Do.	
Cloverdale.	Sonoma.	340	11	46.0	-1.4	77	31	22	6	42	4.24	-	0.82	0	12	18	0	13	Prof. F. P. Brackett.	
Coalinga.	Fresno.	663	1	46.2	-	68	30	15	7	37	1.08	-	0.73	0	5	19	4	8	John O. Ogle.	
Colfax.	Placer.	2,421	42	32.4	-12.0	66	4	8	10	36	2.58	-	0.62	0.40	15.0	11	21	0	10	Union Oil Co.
Colusa.	Colusa.	60	10	43.5	-2.5	71	31	23	6	33	2.62	-	0.88	0.75	2.4	7	22	0	9	Southern Pacific Co.
Corning **.	Tehama.	277	27	44.8	-0.4	68	28	27	5	51	4.27	+ 0.28	1.31	3.2	11	17	2	12	S. D. McComish.	
Cuyamaca.	San Diego.	4,677	14	34.8	-2.3	68	3	12	10	31	5.38	-	1.60	1.97	0	4	20	3	8	Cuyamaca Water Co.
Davissville.	Yolo.	51	41	42.5	-5.1	70	31	20	7	39	3.43	-	0.27	0.95	T.	8	20	2	9	S. H. Beckett.
Deer Creek.	Nevada.	3,700	6	32.4	-	60	25	2	6	32	13.32	-	2.70	84.0	12	18	0	13	Cal. Gas & Electric Co.	
Del Monte.	Monterey.	25	27	47.3	-	68	27	20	6	30	2.97	-	0.98	0	7	18	0	13	Cal. Gas & Electric Co.	
Delta.	Shasta.	1,138	28	42.0	-1.3	65	29	15	6	30	10.06	-	1.23	4.00	29.0	9	19	0	12	Southern Pacific Co.
Denair.	Stanislaus.	126	13	39.8	-	6.6	32	16	6	29	1.26	-	0.91	0.64	T.	3	12	0	19	nw.
De Sabla.	Butte.	2,500	9	37.6	-	69	31	9	6	35	14.82	-	2.73	48.5	11	17	2	12	Southern Pacific Co.	
Dobbins (near).	San Bernardino.	1,650	9	45.4	-	76	31	22	6	32	8.08	-	1.98	7.5	12	18	1	12	Cal. Gas & Electric Co.	
Downieville.	Sierra.	3,150	2	34.6	-	60	31	1	10	37	13.14	-	2.58	64.5	13	17	3	11	Do.	
Dudley.	Kings.	595	1	44.7	-	67	27	16	6	35	0.88	-	0.60	0	3	14	4	13	J. T. Mason.	
Dunlap (near).	Mariposa.	3,000	4	36.2	-	66	3	2	11	39	5.40	-	1.89	16.2	10	19	2	10	Union Oil Co.	
Dunnigan **.	Fresno.	2,800	1	38.3	-	69	27	9	5	37	4.96	-	2.04	10.9	6	12	4	15	W. H. Dudley.	
Dunsmuir **.	Yolo.	65	36	47.5	-1.2	64	27	28	6	-	2.76	-	1.82	0.75	2.0	9	18	1	21	U. S. Forest Service.
Durham.	Siskiyou.	2,285	24	34.7	-4.7	58	3	17	6	-	12.87	+ 1.60	1.60	3.25	64.0	11	16	0	15	Do.
El Cajon.	Butte.	160	18	41.4	-3.9	72	31	13	6	38	4.91	-	1.82	1.82	7.0	7	22	1	8	R. W. Durham.
Electra.	San Diego.	452	14	49.4	-3.9	85	27	19	8	51	1.50	-	0.93	0.62	0	5	26	4	1	H. H. Kessler.
Elsinor.	Amador.	725	9	43.0	-	76	3	15	6	46	6.90	-	2.53	1.0	9	22	1	8	Cal. Gas & Electric Co.	
Emigrant Gap.	Riverside.	1,234	18	39.2	-2.0	58	2	5	6	28	7.85	-	3.26	1.50	19	3	9	9	9	Southern Pacific Co.
Escondido.	Placer.	5,230	39	32.9	-	51	2	5	6	36	2.20	-	2.04	0.60	5	9	21	1	1	A. R. Moon.
Eureka.	San Diego.	657	19	46.9	-2.6	62	2	13	7	43	1.79	-	2.07	0.61	0	5	21	12	se.	
Farmington**.	Humboldt.	64	27	42.7	-4.2	57	31	28	6	18	8.10	+ 0.51	2.62	0	15	6	13	S. U. Weather Bureau.		
Folsom.	San Joaquin.	111	34	41.9	-3.8	64	31	14	7	-	2.98	-	0.12	1.04	T.	9	17	5	9	Southern Pacific Co.
Fordyce Dam.	Sacramento.	252	41	43.2	-3.9	64	31	24	6	27	4.25	-	0.46							

MONTHLY WEATHER REVIEW.

JANUARY, 1913

TABLE 1.—Climatological data for January, 1913. District No. 11—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of rainy days, 0.01 inch or more.	Number of partly cloudy days.	Number of cloudy days.		
<i>California—Continued.</i>																			
Independence.	Inyo.	3,907	17	33.8	- 6.7	65	1	4	7†	35	0.33	- 0.89	0.22	2	16	13	2	...	U. S. Weather Bureau.
Indian Wells.	Kern.	2,500	17	33.8	- 6.7	65	1	4	7†	35	0.33	- 0.64	0.12	0	1	23	7	1	nw.
Indio.	Riverside.	-20	35	49.9	- 3.0	85	26†	16	8	46	0.12	- 0.64	0.12	0	1	12	14	3	...
Inskip.	Butte.	4,975	6	34.0	- 4.2	62	31	6	24	18.59	4.03	85.5	12	14	3	10	1	10	nw.
Ione*.	Amador.	287	35	42.4	- 4.2	66	28	14	6	4.01	+ 0.59	1.20	0	9	20	1	10	...	
Jamestown.	Tuolumne.	1,471	10	40.8	- 4.2	66	28	12	6	5.70	- 3.20	1.85	T.	6	18	9	9	n.	
Kennett.	Shasta.	730	1	40.9	- 4.2	74	26	15	6	33	13.64	3.48	20.5	12	13	9	9	...	
Kentfield.	Marin.	65	25	44.0	- 4.2	71	31	24	7	37	12.07	- 1.26	3.78	4.5	11	11	7	13	n.
King City.	Monterey.	333	26	52.4	+ 4.5	82	29	14	6	59	1.54	- 0.86	0.93	0	6	25	0	6	n.
Lake Eleanor.	Tuolumne.	4,700	3	36.8	- 6.7	67	2	4	7	46	0.37	- 0.27	1.5	2	20	10	1	n.	
La Porte.	Plumas.	5,000	19	30.9	- 2.6	60	25†	5	5	32	9.39	- 8.45	1.55	93.9	13	17	3	11	n.
Le Grand.	Merced.	255	13	41.4	- 4.6	64	31	11	7	31	1.40	- 1.03	0.67	T.	4	17	1	13	w.
Lemon Cove.	Tulare.	600	18	47.8	- 0.6	73	28	18	6	143	1.70	- 1.43	0.72	1.0	4	19	3	9	n.
Lick Observatory.	Santa Clara.	4,309	24	36.6	- 3.3	63	2	11	5	24	5.42	- 0.14	1.77	12	17	3	11	n.	
Livermore.	Alameda.	485	42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lodi.	San Joaquin.	45	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lone Pine.	Sierra.	2,728	8	36.8	- 6.7	67	2	4	7	46	0.37	- 0.27	1.5	2	20	10	1	n.	
Long Valley.	Lassen.	4,400	4	25.9	- 5.5	57	3	- 5	6	36	1.29	- 0.53	17.0	5	10	4	17	se.	
Los Angeles.	Los Angeles.	293	36	52.0	- 1.1	83	3	28	7	32	2.01	- 0.92	1.03	0	7	19	5	7	ne.
Los Banos*.	Merced.	121	26	48.6	- 0.2	60	17†	23	7	1.64	- 0.02	0.80	0	6	19	0	12	n.	
Los Gatos.	Santa Clara.	600	26	45.3	- 2.4	69	31	25	5†	25	6.88	- 0.21	1.68	0	9	18	2	11	n.
McCloud.	Siskiyou.	3,410	3	30.5	- 6.7	53	30†	0	6	31	10.89	- 2.18	74.5	11	18	5	8	...	
Maddoel.	Modoc.	4,528	8	18.5	- 4.0	40	13	- 15	23	35	2.88	- 0.78	28.8	11	...	...	...	...
Madeline.	Lassen.	5,270	4	20.8	- 4.8	52	2	- 12	6†	55	1.70	- 0.50	17.5	11	10	3	13	...	
Magalia.	Butte.	2,321	9	40.5	- 6.7	71	30	12	5†	35	15.87	- 4.31	25.0	9	19	1	11	nw.	
Mammoth Tank.	Imperial.	257	35	50.4	- 3.5	82	20†	21	9	40	0.00	- 0.16	0.00	0	0	25	2	4	nw.
Maricopa.	Kern.	640	24	44.0	- 5.0	67	30	18	5	36	0.50	- 0.26	0	7	14	9	8	n.	
Marysville.	Yuba.	67	42	43.4	- 5.0	71	31	21	10	35	3.05	- 0.66	0.81	3.0	7	18	9	13	s.
Mecca.	Riverside.	-185	7	47.0	- 4.0	80	31	13	8	44	T.	- 0.03	T.	0	0	21	10	0	e.
Menlo Park**.	San Mateo.	64	35	42.2	- 5.1	60	31	23†	6	23†	3.19	- 0.03	0.61	0	9	...	...	...	...
Mered.	Merced.	173	39	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Middlewater.	Kern.	803	2	45.1	- 6.7	66	30	16	7	33	0.63	- 0.61	0	3	13	5	13	s.	
Mill Creek (1).	Amador.	6	37.6	- 6.7	68	31	10	6	37	10.14	3.07	32.0	10	17	2	12	n.	Cal. Gas & Electric Co.	
Milton (near).	Calaveras.	680	22	44.0	- 3.0	62	31	20	6	19	4.49	- 0.34	2.02	T.	8	15	3	13	se.
Modesto**.	Stanislaus.	90	41	43.6	- 3.0	68	30	22	6	- 1.76	- 0.27	1.00	T.	3	13	0	18	...	
Mojave.	Kern.	2,751	36	46.3	+ 1.0	79	3†	10	6	36	0.35	- 0.61	0.25	1.0	2	19	7	5	s.
Mokelumne Hill.	Calaveras.	1,550	20	43.1	- 0.5	68	28	18	6	24	6.16	- 0.76	2.42	6.0	8	17	1	13	...
Mono Ranch.	Ventura.	3,210	7	37.6	- 6.7	64	27	1	6†	36	0.83	- 0.24	5.40	1.0	4	22	5	4	w.
Montague.	...	2,450	25	28.8	- 6.4	46	2†	- 2	10†	36	0.83	- 0.91	0.21	8.8	13	5	12	...	
Monterey.	Monterey.	15	48	48.4	- 1.8	64	29†	24	6	34	3.43	- 0.14	1.03	0	7	23	3	5	e.
Monterio.	Kern.	4,500	14	36.9	- 9.6	62	28†	4	6	24	1.72	- 0.90	1.00	0	0	5	13	...	
Mount Tamalpais.	Marin.	2,375	14	41.2	- 4.7	61	29	22	5	19	4.57	- 0.65	0.82	5.7	11	18	3	10	...
Napa City.	Napa.	20	36	43.5	- 1.2	68	27	24	4	40	4.54	- 0.61	0.94	T.	10	3	23	6	s.
Napa (S. H.).	...	60	35	47.4	- 0.5	67	31	35	7†	30	4.53	- 0.22	0.23	0	1	23	2	6	w.
Needles.	San Bernardino.	477	21	46.7	- 6.1	78	29	24	7	36	0.23	- 0.22	0.23	0	1	23	2	6	...
Nellie.	San Diego.	5,350	4	...	...	70	3	...	...	...	4.45	...	2.05	17.0	3	26	0	5	...
Nevada City.	Nevada.	2,850	21	37.9	- 3.6	77	31	4	6	48	8.76	- 1.84	1.88	22.5	13	18	2	11	s.
Newhall **.	Los Angeles.	1,200	36	45.0	- 2.9	78	31	10	8	46.2	+ 1.69	3.23	0	5	21	0	10	...	
Newman.	Stanislaus.	91	24	44.8	- 2.9	70	29	17	7	30	1.87	- 0.23	0.94	T.	6	...	...	...	...
North Bloomfield.	Nevada.	3,214	16	43.1	+ 1.3	67	25	22	6	6	6.30	- 3.90	1.50	43.0	8	18	1	12	n.
North Fork.	Madera.	3,000	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Oakdale **.	Stanislaus.	156	19	44.0	- 0.7	66	29	22	6	...	2.58	- 0.51	0.64	T.	9	18	6	7	s.
Oak Grove.	San Diego.	2,751	3	42.3	- 7.3	73	25	5†	37	2.41	- 1.08	4.2	...	...	...	...	...	...
Oakland.	Alameda.	36	37	45.6	- 2.0	63	31	30	6	20	3.53	- 1.52	0.79	T.	10	14	5	12	n.
Oceanside.	San Diego.	60	3	49.6	- 6.7	73	3†	21	7	32	1.44	- 0.56	0	5	23	4	4	w.	
Ojai Valley.	Ventura.	900	7	49.2	- 6.7	85	3	13	6†	49	4.36	- 2.60	0	4	23	4	4	sw.	
Orland.	Clem.	254	31	43.2	- 4.4	72	31	25	5	34	3.50	- 0.04	1.08	T.	11	16	5	10	n.
Orleans.	Humboldt.	520	10	43.8	- 2.8	68	31	20	6	38	11.10	+ 0.59	1.95	9.0	13	15	3	13	...
Oroville (near).	Butte.	250	29	42.6	- 4.2	70	30†	15	10	35	5.51	+ 0.03	1.07	6.0	11	19	0	12	nw.
Palermo.	...	213	22	44.8	- 0.7	71	31	16	4	34	3.60	- 1.44	1.00	6.0	5	19	6	6	n.
Palm Springs **.	Riverside.	584	24	49.3	- 6.7	84	24†	18	7†	0.70	- 0.04	0.65	T.	2	22	3	6	sw.	
Pasadena.	Los Angeles.	527	23	49.0	- 3.7	85	3	21	7	41	3.13	- 1.00	1.41	0	6	20	7	4	sw.
Paso Robles.	San Luis Obispo.	800	26	43.8	- 1.6	73	28†	0	6	48	4.37	+ 0.99	1.67	0	8	19	5	7	n.
Peachland.	San Luis Obispo.	190	17	44.2	- 2.6	74	31	21	6	37	11.49	+ 1.12	3.75	T.	12	18	7	6	s.
Petaluma.	...	1,875	24	38.4	- 3.2	60	27†	10	6	32	6.67	- 1.56	1.75	4.0	8	...	...	...
Placerville.	El Dorado.	250	20	47.2	- 2.5	65	31	34	5	15	3.56	- 0.64	0.94	T.	11	15	4	12	ne.
Point Lobos.	San Francisco.	490	21	46.4	- 3.1	63	2	33	5	18	2.79	- 2.23	0.65	0	11	13	6	12	nw.
Point Reyes.	Marin.	490	10	41.4	- 4.6	66	31	20	6	31	2.78	- 1.10	1.50	0	5	18	1	12	...
Pomona.	Los Angeles.	46,9	1	46.9	- 0.7	85	3	21	7	50	2.78	- 0.56	0	6	17	4	10	...	
Porterville.	Tulare.	464	24	45.6	- 2.4	74	31	18	7	42	1.12	- 0.73	0.58	0</					

TABLE 1.—Climatological data for January, 1913. District No. 11—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
<i>California—Continued.</i>																				
Santa Monica.....	Los Angeles.....	110	28	48.4	-5.4	75	2	26	7	27	2.07	-1.21	1.19	0	6	22	4	w. s.	F. E. Hill, Southern Pacific Co.	
Santa Rosa.....	Sonoma.....	181	24	44.3	-3.2	69	31	26	7	34	5.11	-0.74	1.33	0	11	18	3	12	7	Do.
Sefton **.....	Fresno.....	311	27	39.3	-6.4	60	1	12	7	7	1.34	+0.40	0.63	0	6	23	1	7	7	M. Lewis.
Seven Oaks.....	San Bernardino.....	5,000	3	36.6	.....	69	3	7	6	42	2.10	.....	0.58	21.0	4	26	1	4	n.	Mrs. A. E. Gregory.
Sierra Madre.....	Los Angeles.....	1,400	10	50.0	-3.4	78	3	28	6	26	3.99	-1.02	2.91	0	4	20	5	6	s.	C. D. Johnson,
Sierraville.....	Sierra.....	5,000	3	22.0	.....	57	2	-7	19	44	4.20	.....	1.70	42.0	6	15	5	11	s.	Southern Pacific Co.
Sisson.....	Siskiyou.....	3,555	24	27.2	-6.8	47	4	-9	5	30	7.55	-0.08	1.60	74.0	10	15	2	14	s.	Do.
Soledad **.....	Monterey.....	188	39	47.6	-0.5	70	26	23	6	26	2.50	+0.48	1.05	0	6	16	0	15	s.	Chas. P. Jones.
Sonora.....	Tuolumne.....	1,825	25	41.6	.....	64	27	14	6	30	5.38	-1.26	1.63	5.0	9	15	4	12	sw.	U. S. Weather Bureau.
Southeast Farallon.....	San Francisco.....	30	10	48.4	-2.6	57	27	39	6	11	2.51	.....	0.68	0	12	15	4	12	nw.	D. L. Wishon.
Springville.....	Tulare.....	4,000	6	38.1	.....	67	3	7	6	38	1.90	.....	14.0	8	16	0	15	.....	A. D. Frantz.	
Squirrel Inn.....	San Bernardino.....	5,280	3	33.3	.....	62	3	5	6	31	4.61	.....	1.60	15.0	4	22	3	6	n.	Cal. Gas & Electric Co.
Stanwood.....	Butte.....	2,140	10	34.0	.....	54	21	10	13	31	12.19	.....	3.17	16.0	6	24	0	7	n.	Butte County R. R. Co.
Stirling City.....	do.....	3,525	9	37.4	.....	72	27	10	6	41	19.20	.....	4.05	47.0	13	11	6	14	se.	State Hospital.
Stockton (S. H.).....	San Joaquin.....	23	42	42.6	-3.9	62	29	21	6	29	2.40	-0.46	1.23	T.	9	20	0	11	se.	Santa Fe Co.
Storey.....	Madera.....	296	13	42.4	-2.8	72	1	14	6	32	0.75	-0.98	0.37	0	4	25	0	6	.....	Southern Pacific Co.
Suisun **.....	Solano.....	20	33	47.9	+0.7	74	2	29	20	30	3.47	-0.87	0.87	0.1	9	19	2	10	n.	L. S. Lorenzen.
Sulphur Banks.....	Lake.....	1,350	1	40.8	.....	71	31	23	10	38	4.39	.....	1.12	11.2	11	19	6	6	w.	Southern Pacific Co.
Summit.....	Placer.....	7,017	40	23.8	-4.2	46	2	-4	5	27	13.60	+4.82	2.80	13.6	11	18	0	13	s.	C. M. Penry.
Susanville.....	Lassen.....	4,175	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Cal. Gas & Electric Co.
Tamarack.....	Alpine.....	8,000	7	18.8	.....	42	30	-20	5	47	14.56	-0.28	1.93	165.0	13	10	8	13	sw.	Southern Pacific Co.
Tehachapi **.....	.....	3,964	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Tehama.....	Tehama.....	220	42	44.5	-2.5	70	31	29	101	.....	5.66	-1.75	2.30	3.5	8	20	0	11	n.	S. E. Bailey.
Tejon Rancho.....	Kern.....	1,500	10	44.5	.....	70	31	29	101	.....	2.00	+0.42	0.75	T.	6	17	7	7	sw.	J. H. Pierce.
Three Rivers.....	Tulare.....	870	3	42.6	.....	68	28	16	7	35	3.19	.....	1.30	T.	12	19	1	11	se.	Southern Pacific Co.
Towle.....	Placer.....	3,704	27	37.5	-2.8	77	2	8	5	47	14.75	+5.01	3.30	80.0	12	19	5	6	.....	Do.
Tracy **.....	San Joaquin.....	64	33	40.2	-6.7	62	29	18	6	38	1.38	-0.47	0.90	0	3	25	0	6	nw.	Dr. Geo. McCowen.
Ukiah.....	Mendocino.....	620	20	41.8	-3.2	72	31	15	6	41	9.01	+0.66	1.33	T.	12	19	6	6	nw.	C. M. Hammond.
Upper Lake.....	Lake.....	1,350	28	40.4	-3.6	75	31	13	6	40	7.25	+0.83	1.24	T.	13	14	3	14	se.	G. O. Coburn.
Vacaville.....	Solano.....	175	25	42.9	-3.5	74	31	20	7	37	4.13	-1.86	0.78	0.1	10	17	5	9	n.	Southern Pacific Co.
Valley Springs **.....	Calaveras.....	673	24	46.0	-0.8	66	31	18	6	48	4.28	+0.04	1.62	0	10	17	3	11	s.	Santa Fe Co.
Visalia.....	Tulare.....	334	23	44.4	-1.2	68	2	13	5	36	1.06	-1.12	0.56	0	4	23	3	5	s.	Mrs. F. S. Sandford.
Warner Springs.....	San Diego.....	3,165	5	44.2	.....	83	3	13	6	44	2.37	.....	1.18	6.5	4	23	5	3	w.	Spreckels Sugar Co.
Wasco.....	Kern.....	336	13	43.8	-1.7	65	31	18	6	67	0.50	-0.56	0.25	0	2	16	6	9	nw.	U. S. Forest Service.
Waterville.....	Santa Cruz.....	23	17	47.6	-3.8	74	27	20	7	42	5.48	+0.55	1.55	0	9	15	4	12	w.	M. E. Lathrop.
Weaverville.....	Trinity.....	2,162	1	32.2	.....	56	31	7	19	38	8.74	+1.32	2.05	52.5	13	15	4	12	.....	Southern Pacific Co.
Weitchpec.....	Humboldt.....	1,700	3	35.6	.....	57	31	17	6	26	16.36	.....	3.22	38.5	19	16	5	10	nw.	Wm. Lumbard.
Westley **.....	Stanislaus.....	90	24	45.8	-2.0	66	30†	20	5†	.....	1.68	-0.44	0.93	0	5	18	1	12	se.	E. C. Mills.
Wheatland.....	Yuba.....	84	26	42.2	-2.6	62	29†	20	10	27	3.95	-0.57	1.28	3.0	11	19	3	9	se.	S. J. Walker.
Willows.....	Glenn.....	136	34	43.3	-1.9	72	31	24	10†	34	3.37	-0.12	1.08	3.0	8	19	1	11	n.	J. P. Kelly.
Yorba Linda.....	Orange.....	.....	.....	50.2	.....	85	3	26	7	38	0.66	.....	0.48	0	2	20	9	2	w.	.....
Yosemite.....	Mariposa.....	3,945	9	26.8	.....	50	31	-2	11	34	6.69	.....	2.53	47.0	9	18	2	11	s.	.....

*, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for January, 1913. District No. 11, California.*

Stations.	Watershed.	Day of month.																														Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Oregon.																																			
Klamath Agency	Klamath							.40	.40	.06	.05	.90	.30	.40		.30		.80		.30		.13		.33		.03								3.80	
Klamath Falls	do	T.						.03	.32	.06	.05	.23	.16	.44	.31	.15	.33	.12	.38	.05	.30		.13		.33		.03						3.57		
Lakeview	Pitt.	T.	T.								.15	.05	.15		.19		.15		.20	T.	.20		T.		.15									1.04	
Merrill	Interior drainage	T.	T.								.03		.20	.39	.06	.20					T.												1.35		
Vistilas	Pitt.	.43									.48	.01	.28	.10	.02	.42	.28	.14	.48	.22			.10	.15									3.11		
Yonma	Interior drainage																																		
California.																																			
Aguanga	Coast																																		1.61
Alturas	Sacramento							.02	.04	.02	.06	.02																					1.92		
Angels Camp	San Joaquin							.25																										7.48	
Angiola	do																																	0.67	
Antelope Valley	do										.07	.11																					1.63		
Antioch	do										.34		.15																				2.74		
Aptos	Coast							.55			.20																						5.11		
Arrowhead Springs	do										.80																						3.00		
Auburn	Sacramento										.30		.02	.55	.00	.45	.76	.60	.53	.09											4.34				
Avalon	Ocean										.59	.17																				1.34			
Azusa	Coast																																12.02		
Bagdad	Desert																																0.00		
Bakersfield	San Joaquin																																0.30		
Barstow	Desert																																		
Bear River	San Joaquin																																		
Bear Valley	do	.18									.39	.56																					2.49		
Bear Valley Dam	do										.50	.72																				4.87			
Beaumont	do										.20	.20																				1.18			
Beaumont (near)	do											.42																					1.62		
Belotti	do	.10																															3.91		
Ben Lomond	Coast																																12.68		
Berkeley	do																																3.78		
Betteravia	Ocean																																2.74		
Biggs	Sacramento																																3.08		
Bishop	Owens																																1.25		
Bishop Creek	do																																4.52		
Blacksburg	Coast	.13	T.																														15.60		
Blue Canyon	Sacramento	.20																															12.31		
Blythe	Desert																																		
Boulder Creek	Coast																																9.30		
Brown's Dam	Sacramento																																18.12		
Branscomb	Coast																																20.47		
Brawley	Desert																																T.	4.95	
Burney	Sacramento																																		
Butte Valley	do																																	0.62	
Cahuilla	Coast																																T.		
Calexico	Desert																																	1.30	
Caliente	San Joaquin																																9.03		
Calistoga	Coast																																	2.04	
Campbell	Coast																																	2.75	
Carpo	do																																		
Campptonville (near)	Sacramento	.42																																12.54	
Cedarville	Mt'n Lakes	.10																																1.66	
Chester	Sacramento																																	6.38	
Chico	do																																	4.53	
Chico (near)	do																																	5.08	
China Flat	Coast																																	13.46	
Chino	do																																	1.00	
Cisco	Sacramento	.20																																11.20	
Claremont	Coast																																	1.96	
Cloverdale	do																																9.82		
Coalinga	San Joaquin																																1.08		
Colfax	Sacramento	.26																																2.58	
Colgate	do																																	7.55	
Colusa	do																																	2.62	
Corning	do																																	4.27	
Corona	Coast																																		
Cuyamaca	do			</																															

TABLE 2.—*Daily precipitation for January, 1913. District No. 11—Continued.*

Stations.	Watershed.	Day of month.																																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total		
California—Contd.																																			
Fouts Springs.	Sacramento.																																		10.40
Fresno.	San Joaquin.																																	1.22	
Friant.	do.																																	2.24	
Galt.	do.																																	3.13	
Georgetown.	do.																																	6.51	
Gilroy.	Coast.	.02																																4.68	
Gilta.	do.	.04																																11.13	
Glendora.	do.																																		
Glen Ranch.	do.																																	5.68	
Glenville.	San Joaquin.	.11																																2.21	
Glenwood.	Coast.																																	9.23	
Gold Run.	Sacramento.	.80																																11.85	
Gonzales.	Coast.																																	2.61	
Grass Valley.	Sacramento.																																	9.88	
Greenland Ranch.	Desert.																																		
Greenville.	Sacramento.																																	8.38	
Gridley.	do.																																	3.89	
Groveland.	San Joaquin.																																		
Guinda.	Sacramento.																																	5.23	
Hanford.	San Joaquin.																																	1.26	
Head Dam.	Sacramento.	.02																																10.70	
Healdsburg.	Coast.																																	11.03	
Hearst.	Coast.																																	9.29	
Heber.	Desert.																																	0.09	
Helen Mine.	Coast.																																	18.79	
Hetch Hetchy.	San Joaquin.	.04																																3.59	
Holcomb.	Coast.																																	2.85	
Hollister.	do.																																	2.35	
Hornbrook.	Klamath.	.03	.10																															2.73	
Hot Springs.	San Joaquin.																																	3.61	
Hullville.	Coast.																																	14.52	
Hyampom.	do.																																	0.33	
Independence.	Owens.																																		
Indian Wells.	Desert.																																	0.12	
Indio.	do.																																	18.59	
Inskip.	Sacramento.																																	4.01	
Ione.	San Joaquin.																																	5.41	
Jacksonville.	do.	.14																																5.70	
Jenny Lind.	do.																																	4.30	
Jolon.	Coast.																																	2.78	
Julian.	do.																																	3.88	
Kennedy Mine.	San Joaquin.																																	4.58†	
Kennett.	Sacramento.																																	13.64	
Kentfield.	Coast.																																	12.07	
Kernville.	San Joaquin.																																	1.54	
King City.	Coast.																																	2.93	
Knights Landing.	Sacramento.																																	3.10	
La Jolla.	do.																																	3.02	
Lake Eleanor.	San Joaquin.																																	0.93	
Lakeside.	Coast.																																	9.88	
Lake Spaulding.	Sacramento.	.12																																9.39	
La Porte.	Coast.																																	2.23	
Lathrop.	San Joaquin.	.02																																12.30	
Laurel.	Coast.																																		
Laytonville.	do.																																		
Le Grand.	San Joaquin.																																	1.40	
Lemon Cove.	do.																																	1.70	
Lick Observatory.	Coast.																																	5.42	
Livermore.	do.																																	0.37	
Lone Pine.	Owens.																																	1.29	
Long Valley.	Mt'n Lakes.																																	2.85	
Lordsburg.	Coast.																																	2.01	
Los Alamos.	do.																																	1.64	
Los Angeles.	do.																																	6.88	
Los Banos.	San Joaquin.																																	3.16	
Los Gatos.	Coast.																																	10.80	
Lowe Observatory.	Coast.	.20																																2.88	
McCloud.	Sacramento.																																	1.70	
McDoel.	Klamath.																																	15.87	
Madeline.	Mt'n Lakes.																																	0.00	
Magalia.	Sacramento.																																	0.50	
Mammoth Tank.	Desert.																																		
Marijuana.	San Joaquin.																																		

TABLE 2.—*Daily precipitation for January, 1913. District No. 11—Continued.*

Stations.	Watershed.	Day of month.																													Total			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
California--Contd.																																		
Needles.	Desert.																																	0.23
Neillie.	Coast.																																4.45	
Nevada City.	Sacramento.																																8.76	
Nevis.	do.																																8.11	
Newhall.	Coast.																																4.62	
Newman.	San Joaquin.																																1.87	
North Bloomfield.	Sacramento.																																6.30	
North Fork.	San Joaquin.																																7.06	
North Lakeport.	Coast.																																2.58	
Oakdale.	San Joaquin.																																2.41	
Oak Grove.	Coast.																																3.53	
Oakland.	do.																																7.51	
Oceanside.	do.																																1.44	
Ojai Valley.	do.																																4.36	
Orland.	Sacramento.																																3.50	
Orleans.	Klamath.																																11.10	
Oroville.	Sacramento.																																5.51	
Ozeana.	Coast.																																	
Palermo.	Sacramento.																																3.60	
Palm Springs.	Desert.																																0.70	
Parkfield.	Coast.																																3.61	
Pasadena.	do.																																3.13	
Paso Robles.	do.																																4.37	
Peachland.	do.																																11.49	
Petaluma.	do.																																	
Phoenix Dam.	San Joaquin.																																6.15	
Pilot Creek.	Sacramento.																																11.69	
Pinchot.	Coast.																																3.56	
Pine Crest.	do.																																3.40	
Placerville.	Sacramento.																																6.67	
Poin Lobos.	Coast.																																3.56	
Point Loma.	do.																																1.19	
Point Reyes.	do.																																2.79	
Pomona.	do.																																2.78	
Porterville.	San Joaquin.																																1.12	
Priest Valley.	Coast.																																4.28	
Quincy.	Sacramento.																																5.66	
Rod Bluff.	do.																																5.00	
Redding.	Coast.																																7.02	
Redlands.	do.																																1.10	
Redley.	San Joaquin.																																1.37	
Repressa.	Sacramento.																																4.02	
Rialto (near).	Coast.																																4.88	
Rio Vista.	Sacramento.																																3.00	
Riverside.	Coast.																																0.91	
Rocklin.	Sacramento.																																4.90	
Romerville.	Coast.																																8.65	
Ruth.	do.																																15.12	
Sacramento.	Sacramento.																																2.52	
St. Helena.	Coast.																																9.28	
Sainas.	do.																																2.44	
San Bernardino.	do.																																1.69	
San Diego.	do.																																1.19	
San Francisco.	do.																																3.84	
San Jacinto.	do.																																1.07	
San Jose.	do.																																2.29	
San Luis Obispo.	do.																																3.48	
San Mateo.	do.																																4.78	
San Miguel.	do.																																2.09	
San Miguel Island.	Ocean.																																1.65	
Sanger.	San Joaquin.																																2.74	
Santa Ana River.	Coast.																																3.14	
Santa Barbara.	do.																																2.63	
Santa Clara.	do.																																5.57	
Santa Cruz.	do.																																5.59	
Santa Margarita.	do.																																2.07	
Santa Monica.	do.																																6.11	
Santa Rosa.	do.																																4.97	
Sausalito.	do.																																1.34	
Selma.	San Joaquin.																															2.10		
Seven Oaks.	Coast.																																3.99	
Shively.	do.																																4.20	
Sierra Madre.	do.																																1.89	
Sierraville.	M'tn Lakes.																																7.55	
Sisquoc Ranch.	Coast.					</																												

TABLE 2.—*Daily precipitation for January, 1913. District No. 11—Continued.*

Stations.	Watershed.	Day of month.																														Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>California—Contd.</i>																																		
Upper Mattole.	Coast.	.07																																15.91
Vacaville.	Sacramento.																																4.13	
Valley Springs.	San Joaquin.																																4.28	
Visalia.	do.																																1.06	
Warner Springs.	Coast.																																2.37	
Waseo.	San Joaquin.																																0.50	
Watsonville.	Coast.																																5.48	
Weaverville.	do.																																8.74	
Weitchpec.	Klamath.																																16.36	
West Branch.	Sacramento.																																16.19	
Westley.	San Joaquin.																																1.68	
Westpoint.	do.																																7.76	
West Saticoy.	Coast.																																4.59	
Wheatland.	Sacramento.																																3.95	
Willows.	do.																																3.37	
Yorba Linda.	Coast.																																0.66	
Yosemite.	San Joaquin.																																6.69	

* Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

|| Precipitation for the 24 hours ending on the morning when it is measured.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—Maximum and minimum temperatures for January, 1913. District No. 11, California.

Date.	Lakeview, Oreg.		California.																									
			Alturas.		Barstow.		Brawley.		Colusa.		Eureka.		Fresno.		Independ-		Los		Mount		Nevada		Porter-		Red			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1.....	34	6	41	19	71	36	52	29	73	32	58	32	51	37	49	38	65	35	67	47	49	38	58	26	62	29	57	36
2.....	45	19	51	36	68	31	68	30	73	32	58	40	53	36	61	35	60	29	81	45	57	46	68	26	63	32	62	36
3.....	41	17	44	15	71	30	57	30	73	33	58	30	48	38	60	33	59	24	83	55	60	41	71	28	61	32	63	35
4.....	33	11	37	15	61	38	50	21	72	37	56	36	43	37	47	31	52	20	60	43	43	27	48	23	41	32	48	35
5.....	11	— 1	18	— 1	50	24	44	19	47	37	44	28	41	33	39	24	23	9	49	36	30	22	35	14	41	22	37	28
6.....	16	— 8	24	— 8	48	21	47	19	42	24	43	23	41	28	39	17	25	5	47	30	34	23	44	4	46	20	42	28
7.....	26	2	34	8	46	12	48	20	47	22	42	28	50	35	44	20	32	4	50	28	40	31	41	15	48	18	33	30
8.....	26	15	33	17	48	16	54	30	54	21	42	30	47	38	46	27	32	8	57	36	38	30	32	25	56	21	35	28
9.....	18	12	28	4	50	30	40	24	52	21	42	34	46	34	47	32	34	11	52	40	31	25	35	23	57	32	36	28
10....	21	7	28	12	56	22	44	24	54	24	45	35	44	32	44	32	36	19	54	39	38	26	50	6	42	32	43	25
11....	27	2	28	— 6	53	20	45	26	57	24	38	30	46	36	46	31	34	4	55	39	38	32	32	13	45	28	35	28
12....	31	17	34	22	51	21	45	34	59	25	44	32	54	46	55	36	38	10	59	40	42	38	40	28	52	38	33	35
13....	37	29	46	27	52	23	45	35	61	27	50	40	49	41	59	40	38	12	68	44	43	41	42	35	60	30	51	35
14....	36	21	42	5	58	25	43	32	62	28	51	41	52	40	52	45	48	16	55	44	42	33	39	31	57	48	44	44
15....	36	23	35	5	64	26	39	32	66	30	49	40	49	40	51	41	40	31	52	46	41	33	34	29	59	42	47	41
16....	27	17	30	17	62	28	36	31	67	35	53	37	46	37	50	40	33	30	55	45	39	33	38	29	51	43	49	38
17....	29	12	38	6	68	37	44	28	66	40	54	40	53	39	55	42	46	32	59	47	43	36	39	30	58	40	48	38
18....	33	16	40	24	63	36	44	36	66	33	56	42	53	37	53	45	51	20	59	44	44	31	41	34	55	38	52	39
19....	23	9	32	— 3	67	38	46	23	67	33	55	32	45	32	50	36	46	24	58	48	41	31	49	35	54	43	48	34
20....	27	1	30	— 7	62	35	48	23	62	39	54	34	46	31	56	31	39	18	64	44	44	34	49	19	55	33	60	34
21....	27	6	35	2	58	23	52	25	61	29	50	28	48	34	55	32	40	14	63	41	45	33	45	20	56	31	41	32
22....	27	16	33	25	61	23	55	25	62	26	46	30	48	36	52	34	43	14	56	42	42	34	39	30	58	32	48	38
23....	25	— 1	27	— 21	62	26	55	28	68	31	50	31	48	33	55	40	44	23	60	42	47	34	55	22	56	33	54	35
24....	37	15	48	12	66	28	65	30	73	41	54	34	54	42	56	34	60	25	68	42	52	43	64	25	59	32	60	35
25....	40	24	40	15	71	33	65	30	77	34	58	33	50	41	59	38	60	30	72	52	47	47	67	27	60	33	64	37
26....	43	17	35	— 2	73	34	67	33	80	35	60	33	44	40	62	37	60	33	73	42	54	49	69	26	72	30	62	38
27....	47	15	37	— 5	69	34	68	34	75	35	62	34	46	36	66	38	57	26	65	41	56	47	71	28	70	41	66	40
28....	45	16	40	— 1	68	36	70	34	78	48	62	34	48	38	64	40	55	25	77	50	55	49	73	28	66	42	65	38
29....	44	8	37	— 7	75	37	71	35	77	37	62	34	48	37	66	40	63	33	65	45	61	50	70	28	72	43	68	40
30....	40	6	38	— 4	74	38	72	39	81	38	67	34	54	40	65	41	62	32	61	44	57	51	73	27	70	41	68	48
31....	38	13	39	— 7	72	34	77	39	71	49	57	39	67	41	62	35	61	40	60	48	77	30	77	44	72	51	50	64
Mns....	31.6	11.7	35.6	7.5	61.9	28.9	53.4	29.0	65.5	31.9	52.7	34.3	48.5	36.9	53.8	35.2	46.4	21.3	61.4	42.7	45.9	36.6	51.2	24.6	57.4	33.7	51.5	35.7

Date.	California.																										
	Redlands.		Sacramento.		San Diego.		San Francisco.		San Jose.		San Luis Obispo.		Santa Barbara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.		
Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	74	35	57	36	61	48	58	46	59	33	63	45	75	45	58	32	40	27	56	35	36	18	—	44	19	—	44
2.....	76	42	59	37	73	48	58	45	62	32	77	47	78	45	62	31	41	25	58	33	46	22	—	40	19	—	40
3.....	82	42	63	34	78	51	61	44	63	30	77	43	76	46	63	29	40	24	58	29	38	24	—	40	19	—	40
4.....	56	39	49	33	58	46	50	40	49	36	61	42	60	54	60	31	47	12	54	37	30	17	—	30	12	—	30
5.....	42	31	40	27	47	36	41	35	42	31	42	33	52	28	44	32	21	— 9	38	24	10	— 4	—	—	—	—	—
6.....	36	22	43	26	45	28	46	33	44	26	44	20	44	27	44	30	26	8	44	21	34	7	—	32	1	—	32
7.....	50	18	46	23	49	25	48	36	52	25	52	21	58	30	51	26	30	19	46	25	26	5	—	38	4	—	38
8.....	60	24	39	32	56	34	49	36	48	35	53	25	56	32	50	32	28	18	40	27	36	13	—	32	15	—	32
9.....	50	34	37	31	52	41	40	35	42	35	47																